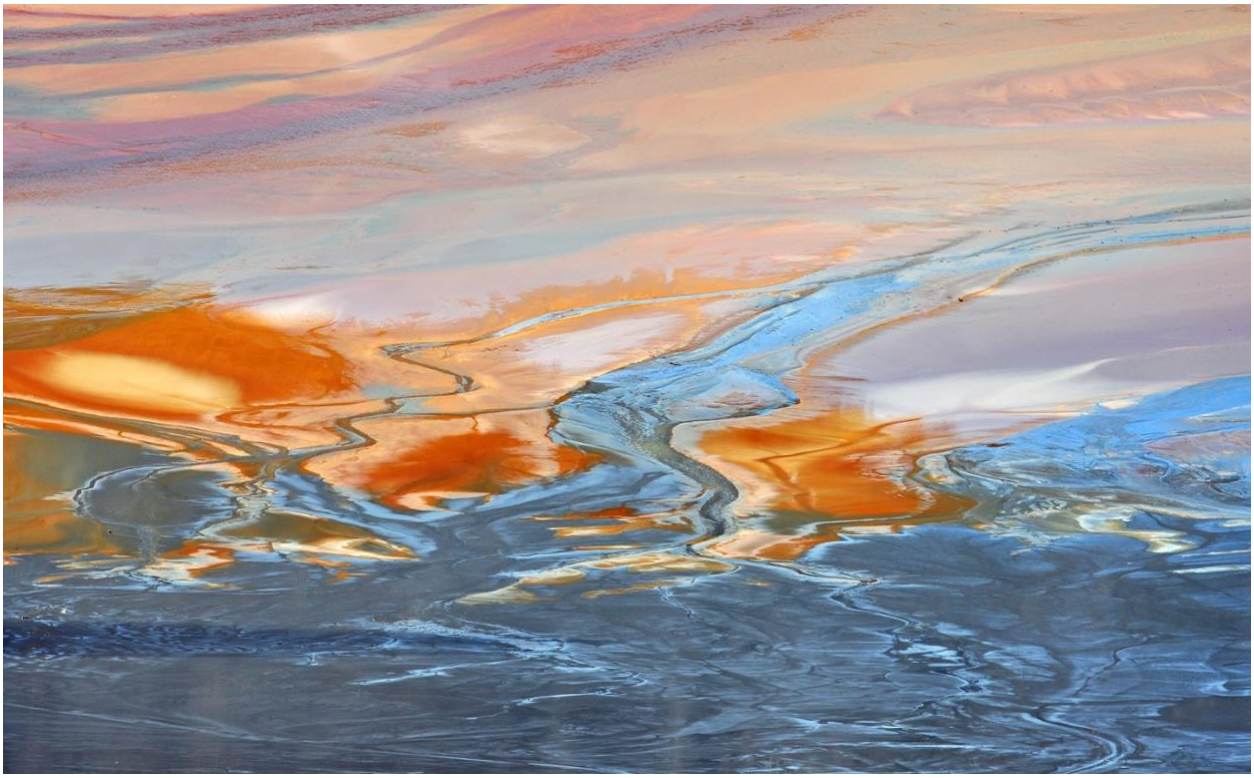
Newsletter, July 13th, 2021



Mercury on the Menu, Bon Appetite

Understanding ocean pollution today is critical, as we now globally recognize that international control measures have been ununited and ineffective. In fact, as oceanic pollution continues to worsen, we seem unable to contain this disaster. By failing to pair the outcomes of pollution with any meaningful solutions, our inactions pose a serious threat to the well-being of humanity.

Mercury naturally exists in the environment. However, our activities in industry (burning fossil fuel, smelting, gold mining, and waste incineration) increases the amounts unleashed into our atmosphere. As the mercury enters our waterways, bacteria/algae convert and change deposited mercury into methylmercury. The methylmercury in algae is eaten by smaller fish, that in turn are eaten by larger fish (occurring in depths of approximately 3,000 feet) which impacts and infects the global food chain.

The toxicity zone is deeper than previously thought, as science teams have discovered methylmercury in marine life that inhabit the ocean's deepest trenches. Experts determined the marine life in the trenches received methylmercury by feeding on the dead fish as they descended from waters near the surface. Methylmercury at these great depths (36,000 feet) shocked researchers from the University of Michigan, one of many groups conducting such research programs, as the poison was thought to only be at near-surface depths (3,000 feet).

This type of mercury exposure has become common place for the United States' population.[1] At least 90 % of the United States' human methylmercury exposure is due to fish consumption with up to 40% of the total exposure deriving from tuna collected from the Pacific Ocean.[2] Global findings are quite concerning as studies have shown methylmercury effects humans (once ingested) in a number of ways that include (but are not limited to); human motor, neurological, and sensory systems, especially in the area of sensory-motor integration.

The solution is simple - A united international front on the reduction of emissions into the environment by various means (mining processes, proper/efficient fuel use, elimination of wastes, etc.) to include real time monitoring on a global scale. Every continent and world power has joined in the battle, uniting against mercury pollution, but the true battle starts with each global citizen. The present damage to the environment is too great to stop entirely thus, quantifiable reduction is the primary goal. Both your contribution and participation are vital to the global reduction of mercury pollution. Join OceanSaviours as we partner with civilization to improve the quality of life for all generations to come.

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[1] Mahaffey KR. Mercury exposure: medical and public health issues. *Trans Am Clin Climatol Assoc*. 2005;116:127-154.

[2] Sunderland EM. Mercury exposure from domestic and imported estuarine and marine fish in the U.S. seafood market. *Environ Health Perspect*. 2007;115(2):235-242. doi:10.1289/ehp.9377